

Simware hardcfg.tcl User Manual

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# Notes:
# 1. Hardcfg.tcl is a TCL script file. It fully follows TCL's syntax
# rules, and supports all the embedded commands of TCL, such as set, for,
# if and so on. What needs to be specially noted is that: in TCL's syntax
# rules, comments should be the lines with "#" at the beginning rather
# than from "#" to the end of line. It is illegal to comment with "#"
# behind the same line of the effective command.
# 2. Notes about inter-slot communication occupying socket port:
# For distributed Simware instance, communication and state
# synchronization between slots within same device are done by using
# the UDP socket.
# Every Simware instance will occupy 4 ports as the following
# method.
# The offset sets the value for the SetWinSockOffset, and will
# be 0 when not set.
# The slot sets the value for the SetSelfSlot.
# 2000 + offset + slot
# 3000 + offset + slot
# 3120 + offset + slot
# 4000 + offset + slot
# This will also produce a semaphore named as (2000 + offset)%100
# for the master board and slave board.
# So setting the offset must be particularly careful, and
# different devices can not occupy the same ports or semaphores.
# Recommended setting values are 100-900, using 100 intervals.
# 3. By default configuration, when Simware startup, old driver
# part will automatically add one console interface, and 8 L2
# can-not-switch FE interfaces with sub-card number 4 (such as
# Ethernet0/4/0). Old driver simulates chip forwarding function of L2
# interface. Please use these interfaces when related to VLAN or
# protocols.
# 4. The interface link between Simwares is simulated by UDP socket.
# Socket parameters when configuring link must be specified.
# When using AddLink, parameters are slightly
# different (parameters in the brackets), but meaning would be same:
# -local(-localip) X.X.X.X IP address used by this device's
# interface socket
# -lport(-localport) XXXX Port number used by this device's
# interface socket

# -dest(-dstip) X.X.X.X IP address used by correspondent
# side device's interface socket
# -dport(-dstport) XXXX Port number used by correspondent
# side device's interface socket

# The above four parameters will be effective only when setting
# at the same time.
# The configuration of interfaces link between local device and
# correspondent side device should be one by one corresponding.
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#      As port numbers within 2000-5000 probably are occupied by
simware inner communication ports. Suggest to use port after 6000 when
binding interface
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# Commands Part A:
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# device memory
# SetMemorySize 128

# Slot number of the board, necessary for distributed Simware
# SetSelfSlot 0

# Slot number of Master main board, necessary for distributed Simware
# SetMainSlot 0

# Slot number of Slave main board?necessary for distributed Simware

# SetSlaveSlot 1

# The socket offset used by inter-board communication, is necessary
when using multiple distributed Simwares.
#Setting Values should be consistent for same one Simware. Different
values need to be set for different Simwares.
#Recommended setting values are 100-900, using 100 intervals. It must
be the first line in the hardcfg.tcl if run
#multiple simwares on the same PC.
#see Note 2.
# SetWinSockOffset 200

# The socket offset used by stateful failover communication, is
effective only when using centralized Simware.
# parameter 1 means local sided offset, parameter 2 means correspondent
side offset, and both of them should be > 0.
# SetWinSockOffsetDHBK 1 2
#
parameters' setting values of two Simware should be exchanged each
other.
# such as:
# device a?SetWinSockOffsetDHBK 1 2
# device b?SetWinSockOffsetDHBK 2 1

# Bridge MAC, is necessary for multiple Simware's
inter-communication. Parameters are two decimal integers.
# SetMac 00 52

# Simware window title name

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# SetSimwareInstanceName DUT1

# Telnet port number Console interface binding, valid range [2000,
3000)
# use windows console input if not set "meaning it is not necessary,
and you can use the console screen"
# SetConsoleCom 2022

# Set Web type, valid range [firewall, router, switch, icg, wlanac,
wlanap].
# default is firewall
# Simware simulate startup with firewall's web if not set
# SetWebStyle router /* Simware simulate startup with Router's Web
*/

# Add an L3 Ethernet interface, all parameters optional
# -index specifies network card number of binding computer, starting
from 1
# -vnet specifies the third byte of Ethernet interfacet's mac
address, default is 5E, decimal parameter.
# -slot specifies interface's sub-card number, default is 1
# AddEthernet -index 2 -vnet 1 -slot 1

# Add a synchronous serial port, the first 4 parameters are necessary.
see Note 6: -slot specifies sub-card number, optional, default is 2
# AddSerial -local 127.0.0.1 -lport 6010 -dest 127.0.0.1 -dport 6020
-slot 2

# Add an ATM port, the first 4 parameters are necessary. see Note 6:
-slot specifies sub-card number, optional, default is 3
# The realization of this interface is not completed. Commend not use
it, can use the new driver.
# AddATM -local 127.0.0.1 -lport 6011 -dest 127.0.0.1 -dport 6021
-slot 3

# Add an E1 controller, the first 4 parameters are necessary. see Note
6: -slot specifies sub-card number, optional, default is 4
# The realization of this interface is not completed. Commend not use
it, can use the new driver.
# AddE1Port -local 127.0.0.1 -lport 6013 -dest 127.0.0.1 -dport 6023
-slot 4

# Set board type, used to set old driver's L2 Ethernet interface number
and sub-card number in V5.
# The first two parameters must be set, the third parameter is
optional.
The first parameter is meaningless now.
# The second parameter specifies the number of created L2 Ethernet
interface in specified board.
# The valid values are 8, 16, 24, default is 8.
# ?slot specifies Ethernet interface's sub-card numer , default is
4

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# see Note 5
# SetBrdType 0 24 -slot 4

# To add socket connection for old driver's L2 Ethernet interface:
-portnum specifies connection port number need to be added,
# 1 means the first port that corresponds to EthernetX/Y/0, 2
corresponds to EthernetX/Y/1, and so on.
# Y is specified sub-card number in the SetBrdType -slot. -portnum
can not be greater than maximum port number specified in SetBrdType.
# see Note 6 for other parameters
# AddLink -portnum 2 -localip 127.0.0.1 -localport 7012 -dstip
127.0.0.1 -dstport 7022

# To add binding network card of old driver's L2 Ethernet interface,
-port specifies binding port, meaning is as same as -portnum of
AddLink
# -adaptor specifies Ethernet index, starting from 1
# BindPortWithAdaptor -port 3 -adaptor 2

# Set that can support type switch feature or not. 0 means not support,
other values means support. default is not support.
# SetCanTypeSwitch 0
# SetCanTypeSwitch 1 or 2, 1 means stateful failover's GE interface
type switch. 2 means interface type switch between POS and GE
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#Commands PART B:
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# Note:
# 1. Since the new driver are free to specify the interface's slot
number and the sub-card number, but can not specify the interface
offset.

# The interfaces offset in the same physical slot & sub-card
starts from 0 and increases.
# Do not add the interface conflicts with old driver added ones.
# 2. All the parameters start from the "-" at the beginning, some
parameters will require a specific value ,
# there is no required order between the different parameters.
# 3. The new driver's L2 Ethernet interface did not simulate chip
forwarding, but directly send the received packet to
# the platform without any handling. Do not use it to test the
L2 features. Suggest to use the old driver interface.
# 4. Some parameters are common to all the new driver interfaces,
common options for each interface are:
# -slot x interface's physical slot number, generally
is consistent with SetSelfSlot(except for fiber board), must
# -subslot x interface's sub-card number, must
# -local x.x.x.x interface's local ip, see Note 6
# -lport xxxx interface's local port number, see Note 6
# -dest x.x.x.x correspondent side interface's ip, see Note

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#       -dport xxxx      correspondent side interface's port number,
see Note 6
#       -backup           the fiber boards or sub-cards which this
interface located in, are out of position
#                               when the system starting(For fiber boards or
sub-cards's hot-plugging simulation)
#       The following parameters are common in Ethernet interface
#       -level2/-level3 layer 2, layer 3 attribute, the default is
layer 3 interface, cannot be used simultaneously
#       -canswitch       interface can be switched to layer 2 or layer 3
#       -cantypeswitch   interface can do type switch(Now only
support switch btween pos and l3ge).
#                               Notes:
#                               1 The configuration will only be valid
when set SetCanTypeSwitch nonzero.
#                               2 can't use the same interface number in
the same slot, such as it's not
right if the interfaces POS1/1/1 and Gigabite-Ethernet1/1/1 both
created in the slot 1.
#                               3 type switch command should be used
carefully. pos or l3ge which are not supported also can be configured,
#                               but the interface can not be created
successfully.
#                               4 Initially, the interface can be
switched will only be l3ge, not pos.
#       -management      interface is the management Ethernet port,
cannot use with option ?-level2? ?-canswitch? and ?-speed 10000?
simultaneously
#       -speed {10|100|1000|10000} specifies the interface speed
#       10, 100 interface name is Ethernet, or M-Ethernet when
with "-management"
#       1000             interface name is GigabitEtherneor,
M-GigabitEthernet
when with "-management "
#       10000            interface name is Ten-GigabitEthernet
#       -combo {21|22|31} interface is a combo port
#       21 L2 single Combo Port
#       31 L3 single Combo Port
#       22 L2 dual Combo Port, It will increase two
offset-consecutive interfaces in one time , as combo
each other.
#       -bindadaptor x bind network card. This parameter need be
improved, can be used after binding network card with old driver
interface.
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# PosX/X/X
# AddPos -slot 0 -subslot 0

# BriX/X/X
# -bsv create BSV interface(both Basic Rate Inteface(BRI) and

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Subscriber line)
# -bri create common BRI interface
? If the above two options are not applied, the default option is -bri.
In other word, create common BRI interface
..
# AddBri -slot 0 -subslot 0
# AddBri -slot 0 -subslot 0 -bsv
# AddBri -slot 0 -subslot 0 -bri

# AuxX/X/X
# AddAux -slot 0 -subslot 0

# EncryptX/X/X
# AddIpsec -slot 0 -subslot 0

# Subscriber-LineX/X/X
# AddVoice -slot 0 -subslot 0

# AsyncX/X/X
# AddAsync -slot 0 -subslot 0

# AnalogmodemX/X/X
# AddAsync -analogmodem -slot 0 -subslot 0

# ATMX/X/X?specify interface's physical type by -phytype
# -phytype PHY_ATM_25M
# PHY_ATM_155M
# PHY_ATM_622M
# PHY_ATM_ADSL
# PHY_ATM_SHDSL
# PHY_ATM_E1
# PHY_ATM_E3
# PHY_ATM_T1
# PHY_ATM_T3
# PHY_ATM_ADSL_2PLUS
# PHY_ATM_SHDSL_4WIRE
# PHY_ATM_SHDSL_8WIRE
# PHY_ATM_SHDSL_4WIRE_BIS
# PHY_ATM_SHDSL_8WIRE_BIS
# AddATMNew -phytype PHY_ATM_25M -slot 0 -subslot 0

# SerialX/X/X common asynchronous/synchronous serial port
# AddSerialNew -slot 0 -subslot 0

# SerialX/X/X FE1 interface
# AddE1 -fe1 -slot 0 -subslot 0

# SerialX/X/X FT1 interface
# AddT1 -ft1 -slot 0 -subslot 0

# E1 X/X/X
# AddE1 -e1 -slot 0 -subslot 0

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# T1 X/X/X
# AddT1 -t1 -slot 0 -subslot 0

# E3 X/X/X
#   -e3 no channelized ability E3 Controller
#   -ce3 channelized ability E3 Controller

# AddE3 -e3 -slot 0 -subslot 0
# AddE3 -ce3 -slot 0 -subslot 0

# T3 X/X/X
#   -t3 no channelized ability T3 Controller
#   -ct3 channelized ability T3 Controller
# AddT3 -t3 -slot 0 -subslot 0
# AddT3 -ct3 -slot 0 -subslot 0

# CposX/X/X
#   -ce1 CPOS that channelized CE1 ability
#   -ct1 CPOS that channelized CT1 ability
#   -e1 CPOS that channelized E1 ability
#   -e3 CPOS that channelized E3 ability
#   -t1 CPOS that channelized T1 ability
#   -t3 CPOS that channelized T3 ability
# AddCpos -ce1 -slot 0 -subslot 0
# AddCpos -ct1 -slot 0 -subslot 0
# AddCpos -e1 -slot 0 -subslot 0
# AddCpos -e3 -slot 0 -subslot 0
# AddCpos -t1 -slot 0 -subslot 0
# AddCpos -t3 -slot 0 -subslot 0

# M-EthernetX/X/X 100M Management Ethernet Interface
# AddEthNew -management -speed 10 -slot 0 -subslot 0
# AddEthNew -management -speed 100 -slot 0 -subslot 0

# M-GigabitEthernetX/X/X
# AddEthNew -management -speed 1000 -slot 0 -subslot 0

# EthernetX/X/X
# Level 3 can not switch
# AddEthNew -speed 10 -slot 0 -subslot 0
# AddEthNew -speed 100 -slot 0 -subslot 0
# Level3 can switch

# AddEthNew -speed 10 -canswitch -slot 0 -subslot 0
# AddEthNew -speed 100 -canswitch -slot 0 -subslot 0
# Level2 can not switch

# AddEthNew -speed 10 -level2 -slot 0 -subslot 0
# AddEthNew -speed 100 -level2 -slot 0 -subslot 0
# Level2 can switch
# AddEthNew -speed 10 -level2 -canswitch -slot 0 -subslot 0

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# AddEthNew -speed 100 -level2 -canswitch -slot 0 -subslot 0

# GigabitEthernetX/X/X
# AddEthNew -speed 1000 -slot 0 -subslot 0
# AddEthNew -speed 1000 -canswitch -slot 0 -subslot 0
# AddEthNew -speed 1000 -level2 -slot 0 -subslot 0
# AddEthNew -speed 1000 -level2 -canswitch -slot 0 -subslot 0
# Level 3 type can switch
# AddEthNew -speed 1000 -level3 -typecanswitch -slot 0 -subslot 0

# Ten-GigabitEthernetX/X/X
# AddEthNew -speed 10000 -slot 0 -subslot 0
# AddEthNew -speed 10000 -canswitch -slot 0 -subslot 0
# AddEthNew -speed 10000 -level2 -slot 0 -subslot 0
# AddEthNew -speed 10000 -level2 -canswitch -slot 0 -subslot 0

# NATX/X/X
# AddNat -slot 0 -subslot 0

# EACLX/X/X
# AddEacl -slot 0 -subslot 0

# Net-StreamX/X/X
# AddNetStream -slot 0 -subslot 0

# URPFX/X/X
# AddUrpf -slot 0 -subslot 0

# MPLS-VPLSX/X/X
# AddMplsVpls -slot 0 -subslot 0

# MPLS-VLLX/X/X
# AddMplsVll -slot 0 -subslot 0

# MPLS-L3VPNX/X/X
# AddMplsL3vpn -slot 0 -subslot 0

# MPLSX/X/X
# AddMpls -slot 0 -subslot 0

# Usb 3G ModemX/X/X
# AddCellular -slot 0 -subslot 0

# Add WLAN-Radio interface of wireless device
# Note, wireless interface only be supported in centralized device.
Please don't add WLAN-Radio
# in distributed device.
AddWlanRadio -slot 0 -subslot 0

# Add OLT interface
#-phytype used to specify interface's physical type. now only support
one physical type PHY_OLT_64. By default, OLT's physical type is

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PHY_OLT_64

AddOlt -slot 0 -subslot 0 -phytype PHY_OLT_64

Add auto-binding RPR logical interface. This logical interface will automatically bind two physical interfaces

-pos2d5 used to specify logical interface type. Now supported type includes: xge(10G ETH type), ge(Gigabit ETH type), pos10(10G POS type), pos2d5(2.5G POS type).

-slot 6 used to specify board which RPR interface locates in. Now logical interface can locate in Active main board or interface board, can not locate in Standby main board.

-subslot 2 used to specify sub-card which RPR interface locates in.

-leftlink 8627 8136: 8627 is west physical interface's socket port number; 8136 is connected device's east physical interface's socket port number.

-rightlink 8637 8126: 8637 is east physical interface's socket port number; 8126 is connected device's west physical interface's socket port number.

#AddRPR -pos2d5 -slot 6 -subslot 2 -leftlink 8627 8136 -rightlink 8637 8126

Add manual-binding RPR logical interface(similar to SR8800 product)

-pos2d5 used to specify logical interface type. Now supported type includes: xge(10G ETH type), ge(Gigabit ETH type), pos10(10G POS type), pos2d5(2.5G POS type).

-slot 6 used to specify board which RPR interface locates in. Now logical interface can locate in Active main board or interface board, can not locate in Standby main board.

-subslot 2 used to specify sub-card which RPR interface locates in.

-leftlink 8627 8136?8627 is the socket port number of this physical interface. 8136 is socket port number of the physical interface which will connect with this one.

Note: this physical interface and the physical interfaces connected with it must bind in different ringlets.

-double: means this physical interface can be normal used only after manual-binding to RPR logical interface.

#AddRPR -pos2d5 -slot 6 -subslot 1 -leftlink 8628 8029 -double